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| Prokaryote | * are the smallest organisms on Earth * Lack membrane bound organelles * Plasmid DNA * Simple * Strong cell walls |
| pathogens | a disease-causing agent, often virus or micro-organism |
| plasmid | a single ring shaped chromosome |
| coccus | are spherical cells |
| bacillus | are rod shaped cells |

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| spirillum | are spiral shaped cells |
| gram stain | is a dye made up of crystal violet and iodine |
| gram positive | bacteria that retain the dye (gram stain) |
| gram negative | bacteria that doesn't retain the dye (gram stain) |
| eubacteria | are hetertrophs that obtains energy by breaking down organic compounds in their environment. |

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| What are 2 types of autotrophs? | 1) photoautotrophs 2) chemoautotrophs |
| photoautotrophs | uses light as an energy source |
| chemoautotrophs | uses energy obtained from chemical reactions |
| aerobes | are bacteria which uses oxygen in cellular respiration to break down food |
| obligate aerobes | are bacteria for which oxygen is absolutely necessary for survival |

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| anaerobes | are bacteria that carry out cellular respiration without oxygen |
| obligates anaerobes | are bacteria that are killed by the presences of oxygen |
| facultative aerobes | are bacteria that can survive with or without oxygen |
| pilli/pillus | a protein bridge used in which cells connect during conjugation (an attachment to other cells or surfaces) |
| conjugation | is form of sexual reproduction in which 2 cells join to exchange genetic information |

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| pathogenic bacteria | are disease causing bacteria |
| what are the two types of toxins? | 1. endotoxins2. exotoxins |
| endotoxins | are released when certain gram negative bacteria split (causes fever, vomiting and diarrhea) e. salmonella |
| exotoxins | are released by living multiplying bacteria traveling throughout the hosts body (doesn't produce fever) ex. botulism |
| waste management | many bacteria can eliminate or neutralize a variety of toxic compounds (ex. clean chemical spills) |

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| sewage treatment | bacteria decompose solid waste and recycle organic matter (ex. septic tanks filled with many aerobic bacterias) |
| bacterium lactis | is used in dairy foods and produces acid, develops textures, and flavors. Are preservative and has vitamin B |
| Green bacteria | is a group of eubacteria that performs photosynthesis |
| Cyanobacteria (blue-green algae) | is the group of eubacteria that use a form of photosynthesis similar to plants and other eukaryotes |
| nucleoid | the region where the bacteria and chromosome/DNA is found |

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| peptidoglycan | a large molecule that forms long chains (Complex cell walls are made of this) |
| capsule | an outer layer on some bacteria and provides protection |
| endospore | a dormant structure that forms inside certain bacteria in response of stress and protects cell's chromosome from damage |
| inorganic chemicals | a chemical that has an abiotic origin (Ex. carbon dioxide, water and minerals) |
| organic chemicals | any chemicals that contains carbon and is produced by living things |

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| transformation | a process in which a bacterial cell takes in and uses pieces of DNA from its environment |
| Generation | Offspring of a parent |
| Flagella | Whiplike structure used for movement |
| Exponential growth | Type of growth experienced by bacteria in ideal conditions = j shaped curve |
| Binary fission | Cell division  Creates a clone of the parent cell |
| Strep | Chain |
| Staph | Cluster |
| Peri | Around |
| Mono | One |
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